

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A system having diamond-like carbon (DLC) contact surfaces, comprising:

relatively movable, facing contact surfaces at least one of which is coated with DLC, and

a lubricant for a system having DLC contact surfaces interposed between said contact surfaces, said lubricant fulfilling following conditions (a), (b), (c), and (d):

(a) wherein said lubricant for a system having DLC contact surfaces comprises a lubricant base oil (A) containing, as a main component, a base oil (X) selected from the group consisting of a hydrocracked mineral oil, a wax-isomerized mineral oil, a poly- α -olefin base oil, and mixtures thereof, wherein said base oil (X) has a kinematic viscosity of 3.5 to 5 mm²/s at 100 °C, a total aromatic content of 0 to 2 mass%, and a sulfur content of not higher than 0.002 mass%;

(b) wherein said lubricant for a system having DLC contact surfaces has a sulfur content of not higher than 0.2 mass%;

(c) wherein said lubricant comprises 0.5 to 1.4 mass% friction modifier comprising glycerin monooleate, and at least two of a 0.05 to 0.3 0.2 mass% alkali metal or alkaline earth metal salicylate in terms of metal element as sulfur-free metal detergent (B), a 0.01 to 0.1 mass% zinc dialkylphosphate in terms of phosphorus elements as a sulfur-free phosphorus compound (C), and ~~a 0.05 to 3.0 mass% friction modifier comprising C6-C30 aliphatic amine, an oxygen containing organic compound selected from the group consisting of alcohols, carboxylic acids, and esters other than glycol esters, and/or a derivative thereof a 0.5 to 2 mass% sulfur-free ashless anti-oxidant (D); and~~

(d) wherein said lubricant is free of sulfur-containing additives selected from the group consisting of zinc dithiophosphate, sulfur-containing metal detergents, and mixtures thereof.

2-3. (Cancelled)

4. (Original) The system according to claim 1, wherein said contact surfaces comprise contact surfaces in an internal combustion engine.

5. (Currently Amended) A method of lubricating DLC contact surfaces, comprising lubricating relatively movable, facing contact surfaces at least one of which is coated with DLC, with a lubricant for a system having DLC contact surfaces interposed between said contact surfaces, said lubricant fulfilling following conditions (a), (b), (c), and (d):

(a) wherein said lubricant for a system having DLC contact surfaces comprises a lubricant base oil (A) containing, as a main component, a base oil (X) selected from the group consisting of a hydrocracked mineral oil, a wax-isomerized mineral oil, a poly- α -olefin base oil, and mixtures thereof, wherein said base oil (X) has a kinematic viscosity of 3.5 to 5 mm²/s at 100 °C, a total aromatic content of 0 to 2 mass%, and sulfur content of not higher than 0.002 mass%;

(b) wherein said lubricant for a system having DLC contact surfaces has a sulfur content of not higher than 0.2 mass%;

(c) wherein said lubricant comprises 0.5 to 1.4 mass% friction modifier comprising glycerin monooleate, and at least

two of a 0.05 to 0.3 0.2 mass% alkali metal or alkaline earth metal salicylate in terms of metal element as sulfur-free metal detergent (B), a 0.01 to 0.1 mass% zinc dialkylphosphate in terms of phosphorus elements as a sulfur-free phosphorus compound (C), and a 0.05 to 3.0 mass% friction modifier comprising C6-C30 aliphatic amine, an oxygen-containing organic compound selected from the group consisting of alcohols, carboxylic acids, and esters other than glycol esters, and/or a derivative thereof a 0.5 to 2 mass% sulfur-free ashless antioxidant (D); and

(d) wherein said lubricant is free of sulfur-containing additives selected from the group consisting of zinc dithiophosphate, sulfur-containing metal detergents, and mixtures thereof.

6. (Currently Amended) A lubricant for a system having DLC contact surfaces, said lubricant being for lubricating relatively movable, facing contact surfaces at least one of which is coated with DLC, and fulfilling following conditions (a), (b), (c), and (d):

(a) wherein said lubricant for a system having DLC contact surfaces comprises a lubricant base oil (A) containing a base oil (X) as a main component, said base oil (X) selected from the group consisting of a hydrocracked mineral oil, a wax-isomerized mineral oil, a poly- α -olefin base oil, and mixtures thereof, and having a kinematic viscosity of 3.5 to 5 mm²/s at 100 °C, a total aromatic content of 0 to 2 mass%, and a sulfur content of not higher than 0.002 mass%;

(b) wherein said lubricant for a system having DLC contact surfaces has a sulfur content of not higher than 0.2 mass%;

(c) wherein said lubricant comprises 0.5 to 1.4 mass%
friction modifier comprising glycerin monooleate, and at least
two of a 0.05 to 0.3 0.2 mass% alkali metal or alkaline earth
metal salicylate in terms of metal element as sulfur-free metal
detergent (B), a 0.01 to 0.1 mass% zinc dialkylphosphate in
terms of phosphorus elements as a sulfur-free phosphorus
compound (C), and a 0.05 to 3.0 mass% friction modifier
~~comprising C6-C30 aliphatic amine, an oxygen-containing organic~~
~~compound selected from the group consisting of alcohols,~~
~~carboxylic acids, and esters other than glycol esters, and/or a~~
~~derivative thereof a 0.5 to 2 mass% sulfur-free ashless anti-~~
~~oxidant (D); and~~

(d) wherein said lubricant is free of sulfur-containing additives selected from the group consisting of zinc dithiophosphate, sulfur-containing metal detergents, and mixtures thereof.

7-12. (Cancelled)

13. (Currently Amended) The system according to claim 1, wherein said alkali metal or alkaline earth metal salicylate comprises an overbased calcium salicylate containing calcium carbonate, and wherein said friction modifier comprises glycerin monooleate.

14. (Currently Amended) The system according to claim 2 1,
~~wherein said alkali metal or alkaline earth metal salicylate~~
~~comprises an overbased calcium salicylate containing calcium~~
~~carbonate, wherein said friction modifier comprises glycerin~~
~~monooleate, and wherein said sulfur-free ashless anti-oxidant~~

(D) comprises octyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate.

15. (Currently Amended) The method according to claim 5, wherein said alkali metal or alkaline earth metal salicylate comprises an overbased calcium salicylate containing calcium carbonate, and wherein said friction modifier comprises glycerin monooleate.

16-17. (Cancelled)

18. (Currently Amended) The lubricant according to claim 6, wherein said alkali metal or alkaline earth metal salicylate comprises an overbased calcium salicylate containing calcium carbonate, and wherein said friction modifier comprises glycerin monooleate.

19. (Currently Amended) The lubricant according to claim 7 6, wherein said alkali metal or alkaline earth metal salicylate comprises an overbased calcium salicylate containing calcium carbonate, wherein said friction modifier comprises glycerin monooleate, and wherein said sulfur-free ashless anti-oxidant (D) comprises octyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate.

20. (New) The lubricant according to claim 5 wherein said sulfur-free ashless anti-oxidant (D) comprises octyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate.